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PATENT SPECIFICATION



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COMPLETE SPECIFICATION

Improvements in or relating to Overlays or Cover Strips of Plastic Material

I, CHARLES ERNEST SLAUGHTER, a British Subject, of Richard's Lane, New Canaan, Connecticut, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to overlays or cover strips of plastic material and more particularly, to extruded strips adapted to overlay and to cover cracks, open joints and seams between wall-board, tile, tile-bathroom fixtures, and so forth, and also as decorative moulding in interiors of automobiles, ships, and so forth.

In many constructions, it is necessary to assemble units of board, tile or other materials in the building of walls, and frequently joints are left between contiguous edges of such wall or other units; or, due to settling of buildings, or cracking, seams frequently open. In many instances, tiled walls such as are used in bathrooms, leave openings between the tile *per se* and a bathroom fixture such as a basin or bath tub; or cracks develop in such structures; or mortar or cement initially used to close such spaces falls out of place. Repairs to such structures to eliminate such openings or cracks are generally expensive and frequently ineffective.

The present invention is particularly concerned with economical means, which may with advantage be of decorative character, for closing openings and cracks of such character.

According to the present invention, an overlay or cover strip for covering an elongated opening in a surface comprises a continuous firm body portion of plastic composition, a flange integral with and set at an angle to the body portion and means on the flange for anchoring the overlay in position and including portions extending outwardly from the flange and directed towards the junction of the flange with the body portion. Conveniently the anchoring means may be integral with the flange, but it may be a separate spring metal element secured to

the flange.

It will be noted that the overlay can be applied to a slot or gap wherever it may happen to appear in contrast to a previous proposal for a jointing strip consisting of a front piece with a rib or bar projecting rearwardly at right-angles and formed with longitudinal barb-like teeth, in which case a groove was cut in the workpiece slightly narrower than the thickness of the said rib or bar and into which the rib or bar was to be pressed or forced.

The overlay according to the invention may be cut to length and readily placed in position; and, in addition to being applicable to overlays serving to cover joints or cracks, for example, between tiles or boards, the invention may be applied to overlays designed to give a finished appearance of ornamental and decorative value.

In order that the invention may be clearly understood and readily carried into effect, constructions in accordance therewith will now be described, by way of example, with reference to the accompanying drawings, in which:—

Figure 1 is a transverse section through one form of overlay;

Figure 2 is a side view of an overlay as shown in Figure 1;

Figure 3 shows an overlay as shown in Figure 1 positioned between contiguous wall-boards or tiles;

Figure 4 shows a modified form of overlay positioned between wall-boards or tiles;

Figure 5 is a transverse section through a further modified form of overlay;

Figure 6 shows the overlay as illustrated in Figure 5 introduced into the gap between two walls at right-angles, and

Figure 7 is a transverse section of a further modified form of overlay for use between joints of sheet metal or other thin sheets.

In the form of overlay shown in Figures 1 to 3, the body portion 1 is provided with two side portions 2, 3, the outer ends 4, 5 of the side members 2, 3

being turned downwardly for purposes discussed below. Along the centre line of the body portion, a flange 6 is provided. This has integral prongs 7, 8 which are set at an angle with respect to the flange 6 and point upwardly towards the side portions 2, 3. This overlay is conveniently produced in continuous strips of any desired length. For increasing the anchoring effect described below, the prongs 7, 8 may be provided with serrated edges 9, 10, while the ends 11, 12 of the prongs 7, 8 are made fairly sharp. The manner in which the overlay is used is shown in Figure 3. This figure shows walls which may be built from wall-boards, or from tiles, in which spaces 15 are left between contiguous tiles or boards 13 and 14, or may develop during use. The overlay is used to cover such an unsightly space or crack 15 simply, economically and in a decorative manner. Thus, a portion of overlay of appropriate length is cut from a strip and the overlay is then placed in position by forcing the flange 6 into the space 15 between the boards 13 and 14 until the side portions 2 and 3 closely approach or actually make contact with the boards 13 and 14 at points 16, 17 while the outer ends 4 and 5 of the overlay are forced against corresponding portions of the boards 13 and 14. The prongs 7, 8 enter the space 15 and wedge into the side portions 18, 19 of the boards 13, 14, the pointed ends of the prongs assisting in such action. The elasticity of the material enables this action to be taken and the body portion to be flexed into the position in Figure 3 to give a rigid structure in which the overlay is locked or anchored in position. The prongs 7, 8 exert a wedging action into the boards 13, 14, locking the overlay securely in position against the counterforce exerted by the flexed side portions 2, 3.

For increasing the anchoring effect, if desired, the serrated edges 9 and 10 of the prongs 7 and 8 may be coated with cement. Ordinarily, the cement is unnecessary and sufficient locking or anchoring is secured without its use.

In the modified form of overlay shown in Figure 4, the body portion 21 carries a flange 26 having an enlarged end 27, the side portions 22 and 23 with curved ends 24 and 25 corresponding with the similar portions 2, 3, 4 and 5 of Figure 1. In this case a spring metal clip may be used to anchor the overlay in position. A continuous spring metal clip is formed by drawing a strip of spring metal into a cross-sectional shape as shown in Figure 4, having a central channel member 28 adapted to engage the enlarged

end or bead 27 of the flange 26 and being returned to form shoulders 29, 30 to hold the spring metal clip in position on the flange 26. From the shoulders 29, 30, the spring metal is bent outwardly as shown at 31, 32 to provide locking or anchoring members. In use, the overlay of Figure 4 is employed substantially in the same way as that of Figure 3. The space 35 between the boards or tiles 33 and 34 is covered by forcing the overlay 21 into position, the flange 26 entering the space 35, while the spring members 31, 32 are urged towards the flange 26, the body portion 21 being flexed as shown in Figure 4 so that a wedging action is produced between the ends 24 and 25 of the body portion making contact with the wall-boards 33, 34, while the spring members 31 and 32 engage and usually bite into the edges of the wall-board 33 and 34. The spring metal portion shown in Figure 4 may extend for the entire length of the overlay or there may be a number of such portions distributed at intervals along the inlay.

The arrangements described above are particularly useful where an overlay is to be placed between wall-boards and tiles arranged in a flat plane. The arrangement shown in Figure 5 may be employed where the space to be covered lies between wall elements at right angles to each other. In this case, the overlay is made of angular contour and has a body portion 41 and side portions 42, 43, the edges 44 and 45 of which are turned inwardly to make contact with the surfaces of the tiles or boards. From the side portion 42, a flange 46 extends downwardly while a shorter flange 47 extends from the lower face of the side portion 43 towards the flange 46. The flange 46 and supplemental flange 47 form a channel in which a Z-shaped spring clip member 48 is placed, one end 49 of the Z-shaped spring member 48 being located in a channel between the flanges 46 and 47. The outer end 50 of the Z-shaped spring member 48 constitutes the locking means for locking the overlay in position. In the use of this construction in spaces between wall elements 53, 54 placed at right-angles with respect to each other as shown in Figure 6, the overlay is forced into position by pressing the spring member 48 into the space between the elements 53, 54 so that the outer ends 44 and 45 of the body member 41 are flexed to engage the corresponding faces of the wall elements, as shown in dotted lines in Figure 6, while the spring member 48 anchors the overlay in position and locks it by the end 50 biting into the edges of the wall elements 53, 54 within the space

between such elements. Here again the spring clip member 48 may be of the same length as the overlay itself or may be discontinuous, spring clip elements then being placed at spaced intervals along the length of overlay 41.

Figure 7 shows a form of overlay for use where thin board or sheet metal is employed and the overlay is locked in position without being confined entirely in the joint or space between the structural elements. This form of overlay can also be employed where the material of which the board or other structural element is composed presents a very hard surface. In this form of the invention, the structural elements 103, 104 may be of sheet metal, asbestos, tile, etc., with a space 105 between them in which the overlay 91 is secured. This overlay may take the form of a main body portion having side portions 92, 93, the ends of which 94, 95 are turned downwardly to make contact with the surfaces of the structural elements 103, 104. A flange 96 carried by the body portion and angularly disposed with respect thereto is provided with extensions or prongs 98, 99 for engagement with the under or rear surfaces of the structural elements 103, 104. A flange 96 carried by the body portion and angularly disposed with respect thereto is provided with extensions or prongs 98, 99 for engagement with the under or rear surfaces of the structural elements 103, 104. Preferably the ends of the extensions 98, 99 are provided with shoulders 100, 101 which abut against the inner edges or corners of the structural elements 103, 104. For this purpose, the flange 96 and intumed extensions 98, 99 integrally formed thereon are of such a length that, when the overlay is forced into position and the body portion is flexed with the ends 94 and 95 making contact with the outer faces of the structural elements 103, 104, the extensions 98, 99 will securely grip the rear surfaces of the structural elements 103, 104 thus locking the overlay in position.

One of the outstanding advantages of the present invention lies in the fact that the prongs, extensions and other locking elements of the overlay possess an inherent spring type action with sufficient "give" to compensate for expansion or contraction in the space between the boards, etc., while still retaining the necessary locking action. The overlay thus adjusts itself to changes which may take place in structural elements because of expansion or contraction due to various causes.

Overlays according to the present invention may thus be used for filling cracks,

openings or spaces between any structural elements such as wall-boards, tiles, and spaces between tiles and bathroom fixtures. The overlays are with advantage made of materials of sufficient elasticity to enable them to be flexed when placed in position so that they may be locked or anchored at the desired point. Thus, the overlays may be produced from synthetic resins of the thermoplastic type, or from other plastic compositions including cellulose acetate, cellulose acetate butyrate, ethyl cellulose, polymerized vinyl materials or other suitable resins and resinous compositions that may readily be extruded in continuous lengths. Such extrusion may be effected by forcing the plastic composition through an orifice of predetermined shape and controlled conditions of heat and pressure so that the plastic material is shaped in long lengths to a contour conforming exactly with that of the orifice or die through which the extrusion takes place.

The overlays may be made to harmonise with particular surroundings as desired, not alone for household and building purposes but for use to cover joints and thus to partake in the decoration of interiors of all kinds including automobiles, aeroplanes, ships, and so forth. The overlays may be flat, curved, ribbed, right angular, or of other angular sections, but in all cases have an outer face or body portion, a flange, and means for anchoring the entire overlay in position.

The natural elasticity of the plastic enables the overlay to be anchored in position as described above. Further, as indicated above, on certain types of board, particularly those of soft and weak texture cement material may be used on the flange or prong portions to increase the anchoring effect.

When the overlays are produced from thermoplastic materials they can readily be installed on curved surfaces. Then, a section is cut to the desired length, heated to the softening point and bent or shaped as desired. It is then allowed to cool to room temperature and, because of the inherent characteristics of thermoplastics, it will retain its new shape and may be installed as described above.

In connection with the use of the overlays with hard woods, hard gypsum, board, etc., where the prongs of plastic material may not be sufficient to bite into the harder surfaces, a spring metal clip arrangement may be employed as described above. Spring steel or brass may be used for such a spring clip arrangement.

In the production of these plastic overlays, the composition employed may be

opaque, translucent or transparent depending on circumstances. Further, the surfaces of the overlay may be ornamented in any desired manner either by surface ornamentation produced at the time of extrusion or subsequently. The outer surfaces may be roughened, bevelled, ribbed or otherwise contoured. Where transparent or translucent materials are employed, colour may be applied to the inner faces of the overlay to show through the translucent or transparent material.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An overlay or cover strip for covering an elongated opening in a surface comprising a continuous extruded firm body portion of plastic composition, a flange integral with and set at an angle to the body portion and means on the flange for anchoring the overlay in posi-

tion which means includes portions extending outwardly from the flange and directed towards the junction of the flange with the body portion.

2. An overlay according to claim 1, in which the anchoring means is integral with the flange.

3. An overlay according to claim 1, in which the anchoring means is of spring metal.

4. An overlay according to any one of the preceding claims, in which the anchoring means includes a barb which is carried on the end of the flange.

5. An overlay according to claim 1 and having a body portion, flange and anchoring means substantially as described with reference to Figures 1 to 3, Figure 4, Figures 5 and 6, or Figure 7 of the accompanying drawings.

Dated this 8th day of April, 1942.

For the Applicant,

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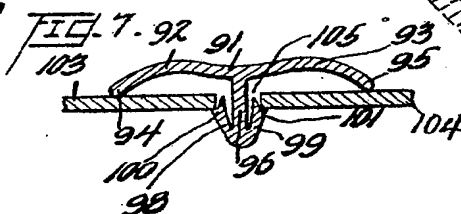
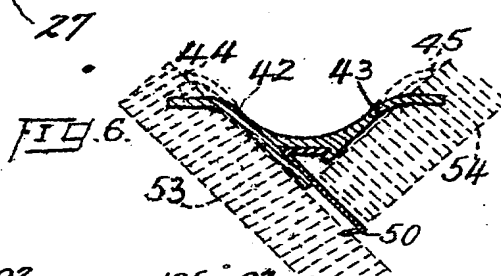
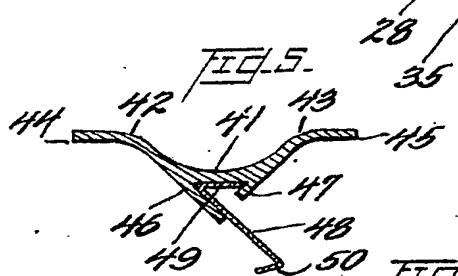
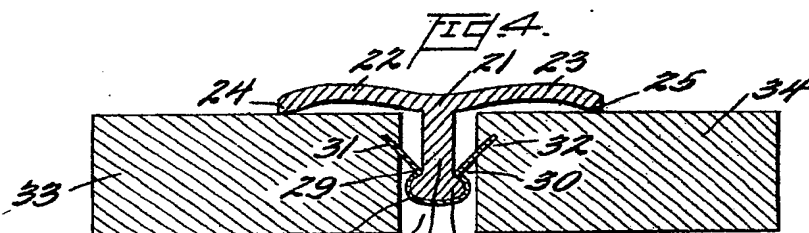
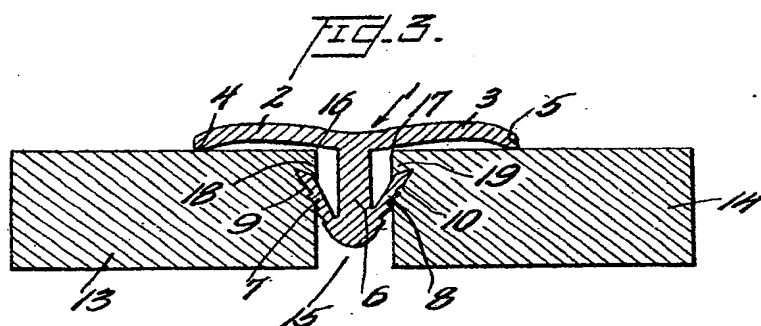
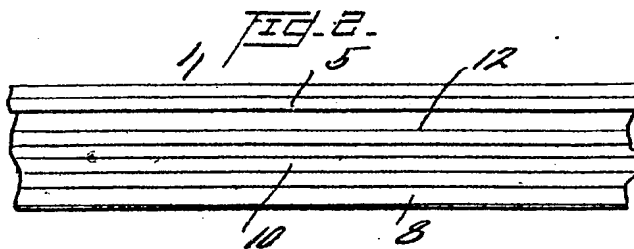
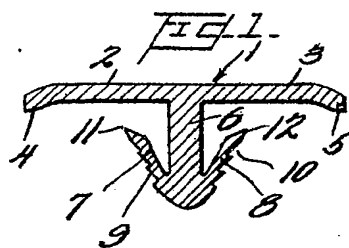
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